

CLAIMS

1. A spray nozzle system comprising:
 - (a) a spray tip including an elongated slot-shaped discharge opening for defining a flat fan spray pattern that subtends a wide angle;
 - (b) a cap body carrying said spray tip in fixed relation thereto and adapted to attach said spray tip to a supply fitting for a source of material to be sprayed in fixed aligned relation thereto;
 - (c) a flow regulating insert carried in said spray tip for connecting said spray tip to said source of material to be sprayed and for controlling the amount of flow through said tip.
2. A spray nozzle system as in claim 1 wherein said flow regulation insert is removable and interchangeable with other inserts to modify tip flow performance.
3. A spray nozzle system as in claim 1 wherein said spray pattern subtends an angle of about 160°.
4. A spray nozzle system as in claim 1 wherein said spray tip and said cap body are designed to be mounted on and attached to a supply manifold in aligned spaced relation to other like spray tips such that consecutive spray patterns overlap but do not interfere with each other.
5. A spray nozzle system as in claim 1 wherein said spray tip outlet opening in conjunction with said flow regulating insert produces spray pattern of large droplets.
6. A spray nozzle system as in claim 5 wherein said droplets have an average size ≥ 600 microns.

7. A spray nozzle system as in claim 1 wherein said flow regulating insert includes a metering orifice.

8. A spray nozzle system as in claim 2 wherein said flow regulating insert includes a metering orifice.

5 9. A spray nozzle system as in claim 1 further comprising a sealing device between said cap and flow regulating insert.

10. A spray nozzle system as in claim 9 wherein said sealing device is an o-ring.

10 11. A spray nozzle system as in claim 1 wherein said spray tip and said cap are formed as a unitary structure.

15 12. A spray nozzle system as in claim 1 wherein said cap further includes a bayonet style twist-on retaining structure which cooperates with a supply fitting on said source to removably secure said cap on said source in a predetermined orientation.

13. A spray nozzle system as in claim 2 wherein said flow regulation insert is snap-fit in place.

20 14. A spray nozzle system as in claim 1 wherein said spray tip, cap and insert are constructed of moldable materials.

15. A spray nozzle system as in claim 14 wherein said moldable materials include polymeric materials.

25 16. A spray nozzle system as in claim 1 further comprising a slot shroud flanking said slot-shaped discharge opening.

30 17. A spray nozzle system as in claim 1 further comprising a cross-hair diffuser insert associated with said flow regulating insert.

18. A spray nozzle system as in claim 16 further comprising a cross-hair diffuser insert associated with said flow regulating insert.

19. A spray nozzle system as in claim 17 wherein said cross-hair diffuser insert is push fitted into said flow regulating insert.

5 20. A spray nozzle system as in claim 18 wherein said cross-hair diffuser insert is push fitted into said flow regulating insert.